

## **ABSTRACT**

A Hall sensing circuit generates a positional detection signal representative of a positional relationship between a rotor and a phase coil of a motor. A signal synthesizing circuit transforms the positional detection signal to a driving signal. Based on a comparison of the driving signal and a high-frequency reference signal, a pulse signal is generated for controlling a switching circuit to drive the motor. A current error signal is supplied through feedback to adjust a relative relationship between an amplitude of the drive signal and an amplitude of the high-frequency reference signal, thereby changing a duty ratio of the pulse signal. A duty-ratio limiting circuit is provided to limit the duty ratio of the pulse signal for ensuring a reliable rotation of the motor.